



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[Docket No. FWS–R2–ES–2020–0040; FXES11130200000–201–FF02ENEH00]

Endangered and Threatened Wildlife and Plants; Draft Revised Recovery Plan for Gila trout

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability; request for comment.

SUMMARY: We, the U.S. Fish and Wildlife Service, announce the availability of our draft revised recovery plan for the Gila trout, listed as threatened under the Endangered Species Act. This fish species is endemic to mountain streams within the upper Gila River basin in New Mexico and Arizona. We provide this notice to seek comments from the public and Federal, Tribal, State, and local governments.

DATES: We must receive written comments on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: *Reviewing documents:* You may obtain a copy of the draft revised recovery plan and recovery implementation strategy in Docket No. FWS–R2–ES–2020–0040 at <http://www.regulations.gov>.

Submitting Comments: You may submit comments by one of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments on Docket No. FWS–R2–ES–2020–0040.
- U.S.: Public Comments Processing; Attn: Docket No. FWS–R2–ES–2019–0040; U.S. Fish and Wildlife Service Headquarters, MS: PRB/3W; 5275 Leesburg Pike, Falls Church, VA 22041–3803.

For additional information about submitting comments, see **Request for Public Comments** and **Public Availability of Comments** under **SUPPLEMENTARY INFORMATION**.

FOR FURTHER INFORMATION CONTACT: Shawn Sartorius, Field Supervisor, New Mexico Ecological Services Field Office, by phone at 505–761–4781, by email at nmesfo@fws.gov, or via the Federal Relay Service at 800–877–8339 for TTY service.

SUPPLEMENTARY INFORMATION: We, the U.S. Fish and Wildlife Service (Service), announce the availability of our draft revised recovery plan for the Gila trout (*Oncorhynchus gilae*), listed as threatened under the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*). Gila trout are endemic to mountain streams in the Gila, San Francisco, Agua Fria, and Verde River drainages in New Mexico and Arizona. The draft revised recovery plan includes site-specific management actions and objective, measurable criteria that, when met, will enable us to remove the Gila trout from the list of endangered and threatened wildlife. We request review and comment on

this plan from local, State, and Federal agencies; Tribes; and the public. We will also accept any new information on the status of the Gila trout throughout its range to assist in finalizing the recovery plan.

Background

Recovery of endangered or threatened animals and plants to the point where they are again secure, self-sustaining members of their ecosystems is a primary goal of our endangered species program and the ESA. Recovery means improvement of the status of listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of the ESA. The ESA requires the development of recovery plans for listed species, unless such a plan would not promote the conservation of a particular species. The Service approved the original recovery plan for the Gila trout on January 12, 1979 (Service 1979), with subsequent revisions approved on January 3, 1984 (Service 1984), December 8, 1993 (Service 1993), and August 19, 2003 (Service 2003).

This draft revised recovery plan for the Gila trout represents the fourth revision and considers updated information on genetics, population status, and threats (principally wildfire effects and hybridization) in the development of revised recovery objectives, criteria, and actions. We used a streamlined approach to recovery planning and implementation for the Gila trout by preparing separate recovery plan and recovery implementation strategy documents. The information in the draft recovery plan provides the biological background, a threats assessment, a strategy for recovery of the Gila trout, quantitative delisting criteria, a list of prioritized recovery actions, and the estimated time and cost to recovery (Service 2020a). The separate recovery implementation strategy document further describes in detail the specific activities needed to implement the recovery actions (Service 2020b).

Summary of Species Information

Gila trout are endemic to mountain streams within the Gila, San Francisco, Agua Fria, and Verde River drainages in New Mexico and Arizona. Although Gila trout were documented to occur in the upper Gila River basin since at least 1885, the species was not described until 1950, by which time its distribution had been dramatically reduced. On March 11, 1967, we listed the Gila trout as endangered under the Federal Endangered Species Preservation Act of 1966 (32 FR 4001). The Gila trout's endangered status was continued under the Endangered Species Act of 1973, and we reclassified it as a threatened species on July 18, 2006, with a special rule under section 4(d) of the ESA (71 FR 40657).

Gila trout are readily identified by their iridescent gold sides, which blend to a darker shade of copper on the opercles (bony plates surrounding the gills). Spots on the body are small and profuse, generally occurring above the lateral line and extending onto the head, dorsal fin, and caudal fin. These spots are irregularly shaped on the sides and increase in size dorsally. A few scattered spots are sometimes present on the anal fin, and the adipose fin is typically large and well spotted. Dorsal, pelvic, and anal fins have a white to yellowish tip that may extend along the leading edge of the pelvic fins. A yellow cutthroat mark is present on most mature specimens. Parr marks (vertical bars present when trout are less than a year old) are commonly retained by adults, and a faint, salmon-pink band is also present on adults, particularly during spawning season, when the normally white belly may be streaked with yellow or reddish orange. Spawning of Gila trout occurs mainly in April and begins when water temperatures reach about 8° C (46° F), but day length may also be an important cue. Gila trout fry [20 to 25 millimeters (mm), or 0.8 to 1.0 inches (in) total length] emerge in 56 to 70 days. Females reach maturity between two to four years after hatching, and males typically reach maturity at two or three years. Most individuals are mature at a length of 150 mm (6 in) or greater,

and live five years. Thus, the majority of adult female Gila trout spawn only twice before dying, and most adult males only spawn three or four times before dying.

Gila trout require perennial streamflow and coldwater aquatic habitats with unimpaired water quality to maintain persistent, viable populations. Flow regimes vary depending on the site-specific characteristics of stream reaches (e.g., stream gradient, seepage, substrate composition, channel dimensions, and watershed hydrology). Suitable water temperature regimes are characterized by maximum water temperatures that do not exceed approximately 20° C (68° F) for six or more consecutive hours in a 24-hour period on more than three consecutive days, and maximum temperature that do not exceed 24° C (77° F). Suitable water quality for Gila trout is characterized by high dissolved oxygen concentration, low turbidity and conductivity, low levels of total dissolved solids, near-neutral pH, and low conductivity. In addition to perennial stream flow and suitable water temperature and water quality, Gila trout require a diversity of habitats sufficient to sustain all life stages of the species (i.e., eggs, fry, juveniles, and adults). This includes suitable spawning habitat, habitat where fry can find shelter and food, and areas suitable for occupancy by juvenile and adult Gila trout. Sufficient pool habitat and spawning habitat are likely the two most important habitat features with respect to Gila trout population persistence.

Fragmentation of the historical distribution of Gila trout has resulted in several populations confined to small, isolated habitats throughout the range of the species. Collections from streams in the upper Gila River Basin and San Francisco River Basin, along with genetic analyses, indicate that five lineages of Gila trout exist: Main Diamond Creek, South Diamond Creek, Whiskey Creek, Spruce Creek, and Iron Creek. The distribution of these lineages has fluctuated since 1975, when only five remnant populations (i.e., a self-sustaining group of Gila trout inhabiting a single stream) were known. Currently, there are 17 extant populations of Gila trout inhabiting approximately

137.5 km (85.2 mi) of stream habitat. These include five populations of the Main Diamond Creek lineage, four populations of the South Diamond Creek lineage, three populations of the Whiskey Creek lineage, two populations of the Spruce Creek lineage, two populations of the Iron Creek lineage, and one population (Dude Creek), which is considered a mixed-lineage population (i.e., a stream or metapopulation that contains multiple lineages of Gila trout, instead of a single lineage). Recently, the Spruce Creek and Whiskey Creek lineages each lost a population following large-scale, high-severity wildfires in 2011 and 2012, respectively.

For Gila trout to be able to sustain populations in the wild over time (viability), the species requires combinations of sufficiently large, healthy populations that, where possible, have connectivity to dendritic stream networks to maintain adequate population sizes and genetic variation. Dendritic stream networks provide Gila trout with access to suitable habitat enabling the species to respond to changes in their biological and physical environment (representation), environmental stochasticity (resiliency), and catastrophic events (redundancy). Few, if any, extant populations of Gila trout are large enough to survive extremes in environmental conditions, and the existing genetic diversity of the species is limited to five remnant lineages. Recovery actions implemented to date have increased the number of populations of Gila trout; however, the spatial distribution of populations is constrained by the patchy distribution and geographic isolation of cold-water streams, many of which are single-stream systems that are relatively small.

Significant factors affecting the viability of Gila trout include habitat loss and fragmentation (Factor A) that result from large-scale, high-severity wildfire and the effects of climate change; unregulated angling (Factor B); predation and competition from nonnative fish that are naturalized throughout the Gila trout's historical range (Factor C); and hybridization with rainbow trout (*Oncorhynchus mykiss*) and small, isolated population sizes (Factor E).

Recovery Plan Goals

The objective of a recovery plan is to provide a framework for the recovery of a species so that protection under the ESA is no longer necessary. A recovery plan includes scientific information about the species and provides criteria and actions necessary for us to be able to reclassify the species to threatened status or remove it from the lists of endangered and threatened wildlife and plants. Recovery plans help guide our recovery efforts by describing actions we consider necessary for the species' conservation, and by estimating time and costs for implementing needed recovery measures.

In this revised recovery plan, we transition from a strategy of crisis-management focused on preventing extinction to an approach of establishing sustainable populations throughout the historical range of the Gila trout, populations that contain the breadth of genetic diversity of the species. The recovery strategy for the Gila trout will entail incremental replacement of nonnative salmonids with Gila trout in suitable habitat throughout a significant portion of the historical range of the species. This strategy will be implemented by conducting actions to substantially improve redundancy, representation, and resiliency to the point that the species is no longer at risk for extinction and may be delisted. Recovery objectives include securing the existing genetic diversity of Gila trout, increasing the geographic distribution of the species, and increasing the size, dendritic population structure, and interconnectedness of populations. The revised recovery plan provides recovery criteria aimed at managing or eliminating threats to meet the goal of delisting the species. These recovery criteria are based on the area of occupied habitat within the Gila trout's presumed historical range, the conservation of genetically distinct Gila trout lineages, the establishment of dendritic metapopulations, and the absence and management of nonnative salmonids within Gila

trout habitat. The site-specific management actions needed to address the threats to Gila trout viability and achieve the recovery criteria involve: (1) repatriation of Gila trout to streams within its presumed historical range; (2) establishment and maintenance of captive propagation and hatchery facilities; (3) management of nonnative salmonids; (4) monitoring of Gila trout populations; (5) conducting public education and outreach; and (6) developing and implementing regulations to maintain sustainable Gila trout populations in streams open to sport fishing.

Request for Public Comments

Section 4(f) of the ESA requires us to provide public notice and an opportunity for public review and comment during recovery plan development. It is also our policy to request peer review of recovery plans (July 1, 1994; 59 FR 34270). In an appendix to the approved recovery plan, we will summarize and respond to the issues raised by the public and peer reviewers. Substantive comments may or may not result in changes to the recovery plan; comments regarding recovery plan implementation will be forwarded as appropriate to Federal or other entities so that they can be taken into account during the course of implementing recovery actions. Responses to individual commenters will not be provided, but we will provide a summary of how we addressed substantive comments in an appendix to the approved recovery plan.

We invite written comments on the draft recovery plan. In particular, we are interested in additional information regarding the current threats to the species and the implementation of the recommended recovery actions.

Public Availability of Comments

All comments received, including names and addresses, will become part of the administrative record and will be available to the public. Before including your address,

phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available. If you submit a hardcopy comment that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so.

Authority

We developed our draft recovery plan and publish this notice under the authority of section 4(f) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Amy L. Lueders,
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U.S. Fish and Wildlife Service.

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